

REMARKS

The present application was filed on December 9, 2003 with claims 1-20. Claims 1, 12, 19 and 20 are the independent claims.

In the outstanding Office Action, the Examiner: (i) rejects claims 1-5, 8-11 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,933,057 to Tchamov et al. (hereinafter "Tchamov"); and (ii) rejects claims 6, 7 and 12-19 under 35 U.S.C. §103(a) as being unpatentable over Tchamov.

In this response, Applicant: (i) amends claims 1, 12, 14-16, 19 and 20; (ii) cancels claims 5 and 17 without prejudice; and (iii) traverses the various §102(b) and §103(a) rejections, for at least the following reasons.

Regarding the §102(b) rejection of claims 1-5, 8-11 and 20, it is well-established law that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Applicant asserts that the rejection based on Tchamov does not meet this basic legal requirement, as will be explained below.

The present invention, for example, as recited in amended independent claim 1, recites an amplifier comprising a first amplifying stage comprising a common-base transistor, a second amplifying stage, coupled to the first amplifying stage, comprising a cascode transistor pair, and at least one matching network comprising a series transmission line and shunt stub. Amended independent claims 12, 19 and 20 recite, *inter alia*, at least one matching network comprising a series transmission line and shunt stub.

While Applicant believes that the claims, as originally-filed, patentably distinguish over Tchamov, Applicant nonetheless amends each independent claim to further define the subject matter of the invention in order to expedite the application through to issuance. In particular, Applicant amends the independent claims to recite at least one matching network comprising a series transmission line and shunt stub. Support for such amendment is found throughout the present specification. By way of example, see page 6, lines 21-27, of the present specification, where FIG. 2 is described. In particular, and as explained at page 6 of the present specification, since a quarter-wavelength in silicon-dioxide is ~600  $\mu\text{m}$  (micrometers) at 60 GHz, shunt-stub microstrip

transmission line (T1-T7) networks are used for the input, inter-stage and output match (FIG. 2). T1 and T2 form the input matching network. T3 and T4 form the inter-stage matching network. T6 and T7 form the output matching network. As shown, each network comprises a series transmission line and shunt stub.

While Tchamov discloses a low noise amplifier, Tchamov fails to teach or suggest a matching network that comprises a series transmission line and shunt stub, as recited in accordance with the claimed invention. The inductor (L1) cited by the Examiner in rejecting dependent claim 5 fails to meet this limitation.

For at least the above reasons, Applicant asserts that independent claims 1, 12, 19 and 20 are patentable over Tchamov. Also, it is asserted that the claims that directly or indirectly depend from independent claims 1 and 12 are patentable over Tchamov, not only due to their respective dependence from claims 1 or 12, but also because such claims recite patentable subject matter in their own right.

Regarding the §103(a) rejection of claims 6, 7 and 12-19, Applicant asserts that such claims are nonobvious with respect to Tchamov for at least the reason that Tchamov does not teach or suggest all of the respective claim limitations. That is, with respect to such claims, Tchamov is deficient for the same reasons as explained above with respect to independent claims 1 and 12.

Furthermore, Applicant also asserts that it is not proper to modify Tchamov as suggested by the Examiner since nothing in Tchamov serves to properly motivate one skilled in the art at the time of the invention to modify Tchamov to attain the claimed invention.

More particularly, the Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination “must be based on objective evidence of record” and that “this precedent has been reinforced in myriad decisions, and cannot be dispensed with.” In re Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Moreover, the Federal Circuit has stated that “conclusory statements” by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved “on subjective belief and unknown authority.” Id. at 1343-1344.

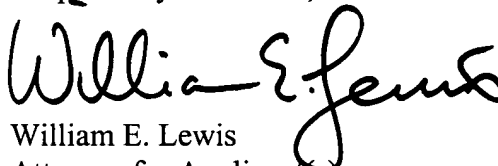
In the Office Action at page 3, the Examiner provides the following statement to prove motivation to modify Tchamov, with emphasis supplied: “[i]t would have been obvious to one of ordinary skilled in the art at the time the invention was made to have implemented the specific

technologies as claimed, since they are based on the routine experimentation to improve the efficiency during the power amplification operation.”

Applicant submits that this statement is based on the type of “subjective belief and unknown authority” that the Federal Circuit has indicated provides insufficient support for an obviousness rejection. More specifically, other than a citation to column 2, line 66, through column 3, line 15, where Tchamov makes an unsupportable boilerplate assertion that “any kind of amplifier components . . . may be employed in the circuit configurations . . . .,” the Examiner fails to identify any objective evidence of record which supports the proposed modification.

In view of the above, Applicants believe that claims 1-4, 6-16 and 18-20 are in condition for allowance, and respectfully request withdrawal of the §102(b) and §103(a) rejections.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William E. Lewis", with a stylized flourish at the end.

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Date: October 3, 2005